Claims

1. An Optical Mechanical Assembly (OMA) for use in a portable optical data storage device, comprising a single piece chassis.

2. An Optical Mechanical Assembly as claimed in claim 1 having mounting means for mounting components of the portable optical storage device thereon.

3. An Optical Mechanical Assembly as claimed in claim 2 wherein, said mounting means is a mounting plate for the motor shaft of the disc spindle motor.

4. An Optical Mechanical Assembly as claimed in claim 2 or claim 3 wherein, said mounting means is a mounting plate for the windings of the disc spindle motor.

5. An Optical Mechanical Assembly as claimed in any one of claims 2 to 4 wherein, said mounting means is a mounting plate for the control circuit of the disc spindle motor.

6. An Optical Mechanical Assembly as claimed in any one of claims 2 to 5 wherein, the chassis is made from metal.

7. An Optical Mechanical Assembly as claimed in any one of claims 2 to 6 wherein, said mounting means is the mounting plate for the sled motor.

8. An Optical Mechanical Assembly as claimed in any one of claims 2 to 7 wherein, said mounting means is the mounting plate for the drive system.

9. An Optical Mechanical Assembly as claimed in any one of claims 2 to 8 wherein said mounting means is the mounting plate for the leadscrew.

10. An Optical Mechanical Assembly as claimed in any one of claims 2 to 9 wherein, said mounting means is the mounting plate for a first guide rail.

11. An Optical Mechanical Assembly as claimed in any one of claims 2 to 10 wherein, a sled motor is attached to said mounting plate, the sled motor being driven onto the leadscrew via a gearbox assembly.

12. An Optical Mechanical Assembly as claimed in any one of claims 2 to 10 wherein, a sled motor is attached to said mounting plate, the sled motor being driven directly from a stepper motor onto the leadscrew.

13. An Optical Mechanical Assembly as claimed in any one of claims 1 to 12 wherein, a second guide rail is mounted on the chassis and the sled motor driven from the leadscrew acts on the OPU via this second guide rail via a cam. This reduces vibrational susceptibility.

14. An Optical Mechanical Assembly as claimed in any one of claims 1 to 13 wherein, screws are used to allow for OPU tilt adjustment.

15. An Optical Mechanical Assembly as claimed in claim 14 wherein, the screws are mounted on both ends of the first guide rail, and one end of the leadscrew.

16. An Optical Mechanical Assembly as claimed in any one of claims 14 or 15 wherein there are three screws.

17. An Optical Mechanical Assembly as claimed in any one of claims 14 to 16 wherein, the screws are mounted on both ends of the leadscrew and one end of the first guide rail.

18. An Optical Mechanical Assembly as claimed in any one of claims 14 to 17 wherein, the screws are mounted on both ends of one of the first or second guide rails, and one end of the other to allow for OPU tilt adjustment.

19. An Optical Mechanical Assembly as claimed in any one of claims 14 to 18 wherein, the screws are spring mounted.